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Women rebuilding lives post-disaster: innovative community practices for building resilience and promoting sustainable development

Julie Drolet, Lena Dominelli, Margaret Alston, Robin Erasing, Golam Mathbor and Haorui Wu

Disasters result in devastating human, economic, and environmental effects. The paper highlights women's active participation in community-based disaster recovery efforts drawing from the results of the 'Rebuilding Lives Post-disaster: Innovative Community Practices for Sustainable Development' by an international research partnership. Two case studies are presented from Pakistan and the USA to demonstrate how women contribute to building resilience and promoting sustainable development in diverse post-disaster contexts. The policy and practice implications are relevant for discussions regarding the post-2015 Sustainable Development Goals and framework.

Partiendo del hecho de que los desastres provocan efectos devastadores en términos humanos, económicos y ambientales y apoyándose en los resultados aportados por el estudio "Rebuilding Lives Post-Disaster: Innovative Community Practices for Sustainable Development" [Reconstruyendo la vida tras el desastre: prácticas comunitarias innovadoras para el desarrollo sostenible], realizado por una alianza para la investigación a nivel internacional, el presente artículo destaca la dinámica participación de las mujeres en las actividades comunitarias de recuperación tras el desastre. En tal sentido, se presentan dos estudios de caso efectuados en Pakistán y en Estados Unidos, los cuales pretenden mostrar cómo las mujeres coadyuvan en la construcción de la resiliencia y la promoción del desarrollo sostenible en diversos contextos posdesastre. Las implicaciones que ello conlleva para las políticas públicas y la práctica resultan pertinentes para los debates realizados en el marco de los Objetivos de Desarrollo Sostenible a ser impulsado después de 2015.

Les catastrophes ont des effets dévastateurs sur les plans humain, économique et environnemental. Cet article met en relief la participation active des femmes aux efforts communautaires de relèvement post-catastrophe en se servant des résultats de « Rebuilding Lives Post-Disaster: Innovative Community Practices for Sustainable

Development » (Reconstruire les vies post-catastrophe : pratiques communautaires innovantes pour le développement durable), rapport produit par un partenariat de recherche international. Deux études de cas sont proposées, une du Pakistan et l'autre des États-Unis, pour présenter la manière dont les femmes contribuent au renforcement de la résilience et à la promotion du développement durable dans divers contextes post-catastrophe. Les implications sur le plan des politiques et des pratiques sont pertinentes pour les discussions relatives au cadre et aux Objectifs de développement durable post-2015.

Key words: resilience; disasters; recovery; gender; partnership

Introduction

Disasters such as floods, wildfires, earthquakes, and hurricanes result in devastating effects on people, economies, and the environment. Climate change, population growth, patterns of economic development, pollution, increased urbanisation, unsustainable development, and widening social and economic disparities have contributed to a recent dramatic increase in global disaster events. The International Disaster Database (<http://www.unisdr.org/we/inform/disaster-statistics>, last checked 9 September 2015) highlights that the incidence of flood and windstorm disasters has not only increased markedly since the 1960s, but the events themselves are more intense, last longer, and affect more people. As signatories to the United Nations (UN) Framework Convention on Climate Change, launched in 1992, most countries have committed to preventing dangerous anthropogenic (human-induced) climate change (Intergovernmental Panel on Climate Change (IPCC) 2014).

The *Sendai Framework for Disaster Risk Reduction 2015–2030* reports that over a ten-year period, from 2005 to 2015, disasters across the world caused US\$1.3 trillion in economic losses, displaced 144 million people, and affected 1.5 billion others (UN 2015, 9). These staggering figures sometimes produce ‘compassion fatigue’, as people become inured to them. Altruistic humanitarian impulses are also stymied through national self-interest, as has occurred in climate change discussions. Climate change, a (hu)man-made disaster, is a global phenomenon, and like other disasters, it affects everyone differently. It has demonstrable deleterious consequences for small island states, in danger of sinking into the ocean as ice-caps melt (IPCC 2014), requiring both mitigation and adaptation endeavours to reduce this threat (IPCC 2014). Diverse communities also experience disasters differently; for example, the more economically and socially marginalised the community, the more risks there are from disasters. Some locations are more vulnerable than others because there are differences in geography, aid and resources are distributed unequally, and the political will to affirm equality between peoples within countries and across borders is absent.

Rebuilding lives post-disaster: a research initiative

In 2012, a research partnership was set up, titled ‘Rebuilding Lives Post-disaster: Innovative Community Practices for Sustainable Development’ (RLPD 2015). It brought

together academic researchers from Canada, the UK, the USA, Australia, India, Pakistan, and Taiwan; practitioners and educators from social work educational institutions such as the Canadian Association for Social Work Education, and the International Association of Schools of Social Work; and community-based and government partners, who bring expertise in disaster recovery and reconstruction. Since our inception, we have conducted field research in six countries to better understand the long-term disaster recovery and reconstruction challenges faced by communities affected by disasters. We recognise building resilience requires more than reducing vulnerability – it calls for empowering responses to disasters, which aim to support and foster people's resilience, enhancing their ability to respond to disasters, against a backdrop of the longer-term challenges of building sustainable livelihoods. In our research, we employ and develop existing theories about the social and gendered construction of vulnerability and capabilities.

This article draws on recent research undertaken by the RLPD partnership, and presents two case studies from Pakistan and the USA, to demonstrate the similarities, as well as differences, in the experience of two communities coping with the impact of different natural disasters and hazards in countries with very different levels of wealth.

The research findings highlight women's active participation in community-based disaster recovery efforts. The study employed qualitative research methods, and the sample for all six countries included over 70 interviews with community leaders, government officials, and disaster responders, and 18 focus group meetings with over 250 affected women and men to learn about the social and economic effects of disasters, and in particular their impact on gender roles and power relations. The research was guided by the principles of community-based research in diverse cultural contexts,¹ which holds that it is appropriate to learn from the perspectives of disaster-affected individuals and community members in disaster recovery processes.

The article starts with three brief sections to frame the research findings and discussion. These explore the concept of resilience, highlight the importance of linking research and programming on disaster risk reduction (DRR) to sustainable development, and examine the topic of women and resilience. The article then presents key points from the research into women's experience from the two study contexts.

Understanding resilience

Our research partnership is contributing to a more nuanced understanding of resilience in post-disaster contexts designed to better understand human society–environment interactions, primarily based on social action and social justice approaches. According to Ungar,

resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural and physical resources that build and sustain their well-being, and their individual

and collective capacity to negotiate for these resources to be provided in culturally meaningful ways. (Ungar 2013, 17)

This understanding of resilience goes beyond an individual notion, to a more relational and holistic approach.

Individuals in similar situations face common challenges, and there is potential to work with them collectively, to lessen their vulnerability and support their agency.

Building the resilience of vulnerable groups requires strong community and government institutions that can support efforts to cope with devastating events, offering social protection and social development initiatives to support at-risk or vulnerable groups. The role of 'social capital' (that is, relations of mutual support between neighbours, friends, community groups, and other social networks) is considered by Robin Erasing (2012) as a means to enhance community resilience. Recent social work approaches to disasters also highlight the importance of environmental justice, arguing that this is integral to social justice, and the realisation of human rights and sustainable development (Dominelli 2012).

Linking DRR to sustainable development

In the face of the rising human and economic costs associated with disasters, and the need to ensure that states do all they can to enable individuals, households, and communities to prepare for, survive, and mitigate the effects of disasters, both DRR and sustainable development have become a high priority for all levels of government in countries across the globe, including those in the global South. Under the UN International Strategy for Disaster Reduction, governments have sought to increase resilience capacity by focusing on community-based disaster risk reduction (CBDRR), and linking this to the Sustainable Development Goals that have replaced the Millennium Development Goals. This is evident in the *Sendai Framework for Disaster Risk Reduction 2015–2030* (UN 2015), which is the successor instrument to the *Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters* (UN 2005).

Our research partnership is informed by a commitment to CBDRR principles. CBDRR as an approach links resilience to sustainable development in various ways (International Federation of the Red Cross and Red Crescent Societies 2011). It promotes the involvement of local people, who speak local languages and know local cultures through being from an area or having studied these thoroughly; involving multiple stakeholders and professional groups; working to co-produce knowledge and solutions by bringing together scientific knowledge and local indigenous knowledges; identifying gaps in DRR knowledge; and preparing people to meet their own needs through prevention, mitigation, adaptation, and reconstruction strategies. However, CBDRR responses are often under-funded within countries, and rely on NGOs and philanthropic

assistance, rather than being state-owned and run, and founded on notions of citizenship and rights.

Making the link between CBDRR and sustainable development is critical, because countries affected by disasters can use high proportions of financial and material resources in the emergency response phase to meet immediate needs (World Health Organization 2015). Currently, these strategies for disaster response are almost always separated from strategies to address longer-term development and reconstruction issues. Yet communities do not face disasters as sudden, one-off occurrences, but against a backdrop of longer-term economic and social development needs, including the need to evolve means of making sustainable, equitable livelihoods. Disaster responses which support these longer-term aims are required. In addition, major disasters are all-too-often partly caused by failures to address issues of sustainable development (e.g. a landslide may occur in part as a result of chronic deforestation and land degradation).

Within the reconstruction process after a disaster, there is an opportunity to 'build back better', ensuring DRR, resilience, and community inputs that are designed as redevelopment. To fulfil this goal, the resilience capacity of communities and states needs to be built. This requires collaborative partnerships that span academic disciplines and transcend social divisions that separate people to develop holistic, cohesive, and solidarity-based relationships that integrate the local and the global in DRR in a mutually inter-dependent manner.

Women, gender relations, and resilience

Gender shapes vulnerability and resilience to disasters in diverse and complex ways. Disasters strike hardest at the poorest communities, as stated earlier, and within them, individuals and groups who suffer marginalisation and discrimination are most vulnerable to their negative effects. It is well-documented in the literature how the life-cycle (from infancy to old age) intersects with the different structural vulnerabilities which particular individuals face. Throughout human societies, gender identity dictates a woman's or man's role in the family and wider society. Other aspects of identity with profound impact on resilience include ethnicity, race, disability, age, or social status.

Every disaster is different, and affects women and men differently according to the particular gender roles and relations within a specific community. Other aspects of identity make individual women's experience vary markedly from others. However, women have been estimated in one study to be seven times more likely than men to die in disasters, and to receive less aid (Bradshaw and Fordham 2013). In many countries of the world, women are more likely to be numbered amongst the poor, landless, and malnourished, and these existing vulnerabilities are enhanced when a disaster strikes. Many struggle in the aftermath of a disaster to maintain family life and reconstruct

communities and cultures. They can be seen as 'victim-survivors' (Javadian 2007, 345), caring for and provisioning children and dependent relatives traumatised by disasters (Rees *et al.* 2005). Those women who have lost husbands in disasters will become sole providers for families.

Critically, when we examined the common factors arising from our research in the case-study sites, we noted that life-stage and structural factors, including taken-for-granted gendered patterns and practices, shape particular vulnerabilities for women. Women are more likely to be responsible for food and water provision, for the care and emotional work within the household, and for the protection of their families in the immediate disaster period. During a disaster, women may be constrained by cultural norms that restrict their movement, they may lack access to adequate information and supports, and shelters may be gender-insensitive, all of which may explain why women are more likely to die in a disaster. In the aftermath of a disaster, women may be left responsible for rebuilding lives when husbands and sons migrate to earn remittance income, and there is strong evidence that women and girls will be more food-insecure when food is scarce (Alston 2015) and that violence against women escalates in the aftermath of disasters, a factor noted in a number of disasters across the world (Whittenbury 2013). Following a disaster, young girls are particularly vulnerable to being withdrawn from education to assist with the workload, to forced child marriages, and to trafficking (Alston 2015).

While the vulnerabilities of women in times of disaster are evident, so too is their resilience. It is important to acknowledge women's capacities to care for their children and family members, and, depending upon the social context, women are engaged in multiple activities and tasks in the productive, reproductive, and community spheres. In our work with women following the Australian bushfires,² we noted that women were active in creating community cohesion through the organisation of communal activities, the building of groups, the establishment of welfare support activities, the lobbying of politicians and others, and through their capacity to focus on community strengths (Alston *et al.* forthcoming). We have witnessed similar activism on the part of women in other disaster sites.

There is a significant risk that post-disaster responses unconsciously act to reinforce existing gender inequalities – for example, by distributing resources to the male head of households, by provisioning traditional male occupations and ignoring women's small business enterprises, by seeking advice and decision-making support only from male leaders, and by assuming that cultural constraints are fixed and unchangeable. Rather, we would argue that post-disaster activities must build and resource women's resilience and adaptive capacity in practice and challenge the constraints that impinge on their lives. The research partnership and the community-based approach we have taken factors in these concerns, and provides further insight into these issues.

Case study 1: Flooding in the Bodin district of Sindh, Pakistan

This case study illustrates how community-based approaches to disaster recovery must take into account the needs of women. From their role in maintaining the home environment to rebuilding the community, the study shows the vulnerability and capability of women in post-disaster activities. The need to address the diverse challenges faced by women in disaster recovery is integral to a more holistic approach to building resilience and sustainable development in devastated communities. The case study also shows the need to improve gender disparities in disaster management. Findings of this case study also focus on women's contributions in building resilience and sustainable development in diverse post-disaster contexts.

Pakistan has experienced 13 major floods since independence in 1947 (Government of Pakistan 2013, 1). The 2010 super floods were unprecedented, while the 2011 rains and floods severely affected lives and livelihoods in the Sindh Province. The RLPD country team in Pakistan selected the Bodin district of Sindh for this case study. Bodin has a population of 1,093,081, 55 per cent of which is female. Research took place in Bodin district, and involved both men and women in roughly equal numbers.

According to the UN, 'gender inequality, despite much progress, remains among the greatest challenges for the country. Compounding the situation are prevalent social norms and practices, which create difficulty in accessing services and equal opportunities' (UN Pakistan 2013, 6). Pakistan has a Gender Inequality Index value of 0.5459, ranking it 135 out of 136 countries in the 2013 index (*ibid.*). Examples documented by the UN (*ibid.*) include women being traditionally discouraged from entering public life, and men resisting women working outside the home; and the fact that domestic violence is endemic, but is not always taken seriously.

Changes and strain on women's gender role in families and communities were evident post-disaster, with our research suggesting women's workload had effectively doubled as a result of the 2010 and (particularly) the 2011 floods that affected the Bodin district (Focus Group, Baksho Dero, 11 January 2014). In contrast, men's workload remained largely unchanged. At a focus group for women in the village of Baksho Dero, Bodin district, the gendered dynamics of survival after the floods were discussed (11 January 2014). Traditionally, women in the area affected by the flooding are primary carers, providing food and basic medical care to children and adults. Norms of seclusion in communities in the district created particular issues for women, who do not usually leave their households unaccompanied by a male relative. When houses were destroyed or rendered uninhabitable due to floods, this created evident issues for women and girls.

After the floods, women were required to lend their labour to support or provide assistance for the quick recovery of agricultural activities for their family. The floods damaged men's employment and livelihoods, and they faced unemployment; in the aftermath, they were attempting to rebuild their livelihoods, but in the meantime growing food for family use was even more important for families. This required

women to be in the fields working. Women also participated in rebuilding homes in the village in the wake of the floods. Men purchased the materials and supplied the materials needed to rebuild their homes.

Despite the changes in the gender division of labour required in the immediate aftermath of the flood, and the difficulties involved in conforming to norms of seclusion, women attempted to adhere to these norms wherever possible. In a focus group session, women affected by these conditions called for the government to provide gender-sensitive services for victim-survivors in the shelter housing it had provided. Women reported that they had encountered difficulties both during and immediately after the floods. The need to remain secluded meant that women also suffered disproportionately compared with men in the post-flood period by staying in small overcrowded rooms and caring for their children there. For those who were pregnant, facing the prospect of delivery in this situation was very difficult. A shortage of washrooms was one of the biggest problems for women, and they were forced to defecate in the open, due to a lack of lavatories. Women reported that they had to wait for the night or early hours of the morning.

After the floods, agencies providing services for women in the area neither increased nor decreased their work, but their focus shifted from programming on violence against women and girls (VAWG) and other issues, to disaster and climate change concerns and their impact on women. Some women doctors established organisations in the affected areas to help devastated people, post-flood. For example, the Gender and Child Cell was established within the National Disaster Management Authority, and a guideline for gender-based needs was formulated.

This case study suggests the lengths to go before agencies are able to respond to the needs and interests of women and their communities. It shows how formal and informal laws, attitudes, and cultural practices affect disaster management in complex ways. Gender and development literature emphasises the ways gender norms are reflected in institutions including the state (Kabeer 1994), but they do not always respond to the needs that these norms create. The provision of shelters by government was effectively gender-blind to cultural constraints on women, even though state institutions staffed by national staff might be expected to be sensitive to culture. It is possible that this is due to the technical nature of shelter and water and sanitation provision, which is delivered by professional staff and planners. They may not put sufficient emphasis on cultural and social practices in different locations, which affect access to services on the ground.

Women face restrictions in their lives both before and after a disaster strikes – which are matters of rights, justice, and empowerment. The case study shows that in spite of the cultural and social restrictions on women and girls, after a disaster women were required to take on additional roles in reconstruction of family life as well as reconstruction of their homes. In Bodin, women took an active role in the reconstruction process by taking on roles and responsibilities usually held by men, such as building houses and

working in agricultural fields. Agencies working with these communities needed to ensure that wherever possible they were supporting women, men, and families in ways which were improving the daily lives and conditions of women and girls, enabling them to chart a path between fulfilling cultural and social expectations and meeting the practical requirements of the post-flood situation. In addition, agencies need to consider how they can best work in ways which potentially support longer-term positive change to gender roles and relations.

Case study 2: Hurricanes in Volusia County, Florida, USA

As suggested at the start of the article, resilience has individual and collective dimensions, and individuals respond to, and recover from, disasters within an environmental and social context. The following case study demonstrates the key role of social capital and collective action in the form of a call to action and the mobilisation of local resources and assets to spur post-disaster recovery (Ersing 2012). In the case of Volusia County, grassroots collective action illustrates a key lesson of post-disaster recovery as it served to buffer the protection of self-worth and human dignity of a particularly hidden and vulnerable population, migrant farm workers.

In 2004 and 2005, a series of four hurricanes landed in Volusia County, Florida, USA. Volusia County, with a population approaching 500,000, is an important agricultural area situated on the Atlantic coast of northeastern Florida. The county's agricultural industry attracts a large concentration of migrant farm labourers who engage in such activities as field and orchard harvesting, food packing and sorting, and horticultural work. In 2004, the state of Florida experienced an unprecedented hurricane season with four named storms making landfall in 44 days in August and September. Three of those hurricanes (Charley, Frances, and Jeanne), each struck land in Volusia County, leaving in their paths damage to the state totalling over US\$45 billion (FEMA 2009, 1). In 2005, Volusia County was hit by hurricane Wilma causing the state an additional \$20 billion in destruction (Malmstadt et al. 2009, 118). As a result, accumulated storm damage took a heavy toll on the agricultural industry in Volusia County, thus affecting the livelihoods of its many migrant farm labourers.

Limited English Proficiency (LEP) populations have gradually gained attention in the hazards literature of the USA, with particular attention given to Hispanics, Haitians, and Asians. Still, a gap remains in it with regard to Spanish-speaking migrant farm labourers, and their families, including those with undocumented status. This vulnerable group is often a silent voice in community disaster planning (Mathew and Kelly 2008).

Between 2013 and 2014, we carried out research in Volusia County aiming to understand the challenges faced by the LEP migrant farm-worker community in recovering from the devastating hurricanes in 2004 and 2005. Of particular interest was the role of women in the LEP migrant community and their efforts in post-disaster recovery. A focus group session was held with affected women who spoke limited English, and

either worked themselves as migrant labourers or had a significant family earner (e.g. their spouse or partner), who was a farm worker. Data suggest that speaking Spanish at home, and speaking English less than very well or not at all, correlates with a series of indicators linked to increased social vulnerability (American Community Survey Reports 2013). Indicators include having less than a Twelfth Grade education, being aged over 60, living in poverty, and having a disability. These multiple factors make people less resilient to disasters. We believe these factors create risks among LEP migrant farm-worker communities, thus making this population less resilient to disasters. Beyond the barrier of language and the added layer of social vulnerabilities mentioned above, this population often falls prey to a power differential exerted by some agricultural operators who control employment, housing, and transportation (Southern Poverty Law Center 2014).

A total of seven women participated in the focus group, which was held in the living room of one of the women. The session was conducted in English and Spanish, and the discussion was tape-recorded with permission. Because of the nature of this small town rural area, the women preferred to remain anonymous to those outside the focus group, and wished not to have their names, ages, or any other personal information recorded. They ranged in age between 18 and 53 years old (the mean average was 26 years), four were married, and their households ranged from two to seven people. Six of the seven were Latin American and Catholic, and two had some education beyond secondary school.

Collectively the women agreed that the hurricanes had posed serious problems for the health and safety of their families and the livelihoods of their households. The women shared their post-disaster experiences of the hurricanes making landfall. Participants spoke about challenges faced by their community with regard to issues of trust and lack of preparedness. One woman recalled that within days of the storm:

My home smelled like fish and it had flies ... my children were very young and we did not have any lights or water and it was awful. I asked FEMA [Federal Emergency Management Agency] for assistance but they did not provide it because I did not qualify ...

Another participant recalled the lack of help given in the aftermath:

The police came to the disaster area to check the status of the people and they said everything was okay ...

The participants spoke of how a small group of women spontaneously organised as *Alianza de Mujeres Activas* (AMA; Alliance of Active Women) in response to the lack of help more than 48 hours after the hurricane. This grassroots group had strong ties to the migrant farm-worker community, with members of their households engaged in this work. The primary mission of AMA was to bridge a gap by providing outreach

and assistance to the LEP community which had been overlooked by the government sector of emergency management. Some women in the focus group felt this may have been due to weak relationships between the migrant community and local government. Those females who initiated AMA expressed during the focus group their desire to provide mutual support to those in the migrant community who were in need. Destruction of crops meant loss of employment; damage to housing left people needing shelter, as well as food, clean water, and supplies for children, such as diapers (nappies) and formula.

The focus group recounted that as a call went out through social networks in the LEP community, people began to gather whatever items they could spare, and an informal humanitarian distribution site was launched in the front yard of a female community member who spoke both English and Spanish. Outreach teams of women delivered care packages into the impacted areas of the community and, while handing out supplies, also searched for those in need who had been passed over by the traditional disaster-serving organisations. AMA then initiated a second mission, which involved developing a resource list of all existing social service agencies, and volunteer and faith-based groups in order to link those in need with resources.

During the focus group, members of the migrant labourer community spoke of the strength found within their collective actions to unite and support each other during the early stages of disaster recovery. One female participant recounted:

Elena opened a distribution site there in her front yard ... people started to bring food to her house and we started supporting her so we can distribute food into the community while we look for people who were in need ...

Another focus group participant appeared to be capturing the overall sentiment of the post-disaster experience resulting from the reliance on social ties and networks, saying:

I think a lot of people came closer together, like people did not take their friends or family for granted ... and neighbours were helping each other ...

It seemed that the work of AMA had promoted a sense of unity within the community, including building bonds of trust with outside assets such as the American Red Cross and the County Health Department. The result was that a sense of tangible collective resilience was built up in a vulnerable population that had up to that point been largely hidden from the authorities.

The focus group recounted that over time, AMA has continued to expand its capacity through volunteer efforts and partnerships with new organisations such as public media, faith-based groups, and local emergency management. AMA members now regularly participate in health fairs and media promotions through Univision and Tele-mundo television to educate the LEP community on disaster preparedness. The efforts

of AMA, led by a group of determined women, have contributed to the creation of a bilingual volunteer community emergency response team (CERT), and the formation of *El Grupo Comunitario de Respuesta a Desastres* (Community Disaster Response Group). *El Grupo* now represents a broader mix of community members (e.g. including both men and women, people who are bilingual as well as people with little English, young people as well as adults). It is now engaged in identifying and planning for the needs of the LEP and farm labourer communities with emergency management leaders to promote resilience and post-disaster sustainability.

Conclusion: policy and practice implications

In 2015, governments will consider the post-2015 sustainable development framework, a UN climate change agreement, and the post-2015 framework for DRR. All of the 2015 international agreements must promote gender equality and human rights to build the resilience of vulnerable and marginalised people and communities. The *Sendai Framework for Disaster Risk Reduction 2015–2030* calls for a just, gender-equitable, disability-inclusive, and sustainable future for all members of society (UN 2015). Disasters can provide an opportunity to redress gender disparities. Good practices are context-relevant and empowering, and use women's skills and leadership to build resilience and DRR. There is a need to improve livelihoods, enhance community disaster preparedness, mitigation, and prevention, with the involvement of women and men. A participatory and bottom-up approach led by affected communities holds great promise that post-disaster recovery processes will be better able to meet their needs. Empowering women in the post-disaster context is necessary given that disasters expose and exacerbate the social exclusions present in a society.

The two case studies we have offered here illustrate the resilience of women, as individuals and collectively, and the challenges they face from institutions which do not fully recognise either the immense importance of their role in the aftermath of disasters, or the need to ensure disaster responses and risk reduction are informed by a commitment to ensuring institutions work with women to build current and future resilience.

The Pakistan case study highlights the complexities of gender roles and relations and the potential to make women's daily lives far more challenging, hazardous, and exhausting than before if they are not involved in planning responses. It shows how gender-blind institutions fail women and ultimately families and society by failing to recognise women's resilience and resourcefulness in coping with the aftermath of disasters. In contrast, the US case study again shows institutional failures but offers an example of women's collective action to secure daily needs, advance women's gendered interests in the aftermath of disasters, and the ways in which collective action can strengthen resilience at community as well as household level, making communities more likely to withstand future disasters.

The implications of the case studies are clear for states and civil society organisations seeking to support people living in poverty to become more resilient and withstand the worst effects of disasters. Women need to be fully involved in planning for disasters, and their huge role in responding to disasters needs to be fully recognised, analysed, and supported in the ways they consider most appropriate and helpful. Risks and vulnerability to disasters have a gender dimension yet the perspectives of women are not always present. Previous post-disaster research clearly demonstrates that men play a dominant role, not only in the decision-making process, but also throughout the entire response, reconstruction, and recovery processes.

The case studies here show women contributing differently from men in post-disaster reconstruction and recovery, regarding work, food and water provision, and the care and emotional work within the household. Women are also involved in labour which might be seen as 'man's work' outside disasters, such as rebuilding houses and working in agriculture. Despite women's important contributions in disaster recovery, their voices are not always included in the policymaking process. The inclusion of all socio-cultural groups is necessary to ensure that their specific needs and concerns are addressed, as evident in the US case study with LEP populations, for example.

In addition, these case studies remind us that resilience is built from the foundation of economic and social security. Living in poverty as part of a marginalised group creates few opportunities to build up the resources needed to fall back on at a time of disaster. Social protection initiatives that provide access to essential services and income, including protection from the risks of disasters, is a universal human right and contributes to building resilience by improving economic security, health, and well-being (Drolet 2014). The case studies also have valuable things to say about the particular significance to women of social relationships and networks – in particular, in communities in which social protection is not available and households are poor. Women are typically more involved than men in caring work around the home, and often have less of a role than men in earning money, or saying how it should be spent. They frequently have almost no time for socialising. However, social networks are critical to their livelihood strategies, as well as to their mental health and resilience. Lessening isolation is a key to unlocking the power that is to be found in collective action. Following the disasters we researched in Pakistan and the USA, women (in particular those with health issues and particularly limited socioeconomic resources) faced marginalisation that affected their psychosocial well-being. Opportunities for dialogue and communication can provide women with the spaces to connect and encourage those around them, and build social capital. From that, women can build on their relationships with others, to find common objectives to organise around, and create organisations to advance their goals.

States and relief agencies should look for opportunities to foster social networking among women, understand these processes of organisation, and commit to working with women's organisations and movements. All people and groups affected by

disasters should be directly involved in decision-making during the post-disaster reconstruction planning, governance, and development at the local grassroots level. It is imperative that women participate and be involved in decision-making processes in a non-discriminatory manner. Women's knowledge, agency, and collective action must be fully recognised and supported to build resilience, reduce disaster risks, and contribute to sustainable development.

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Notes

- 1 Community-based research is a method used to engage the community, and there is a growing body of evidence in support of community-based research that involves the communities in question in all phases of research (see Nepal *et al.* 2010).
- 2 The Australian bushfires (wildfires) occurred in the state of Victoria on 7 February 2009 and is the single largest disaster to occur in Australia during peacetime since Federation. Thousands of people were deeply affected by the traumatic experience of the Black Saturday bushfires that resulted in 173 people losing their lives, over 2,000 homes lost, and 78 towns impacted. The Australian country team conducted research in partnership with affected communities in 2013–14 to learn about their experiences.

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